

Appendix D

SPECIAL STATUS PLANT SPECIES AND NOXIOUS WEED SPECIES IN THE ANALYSIS AREA

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Agavaceae	Agave	murpheyi	Murphey's century plant (Hohokam agave, or Murphey agave)		BLM Sensitive (Phoenix District)		State Protected Species (Pinal)				Present in low numbers in desert foothills of Central Arizona (BLM, 2010). The only known Pinal County locality is along Queen Creek near Superior, Arizona (AGFD, 2003d; AGFD, 2004m). Elevation range 1,300 to 3,200 feet (AGFD, 2003d).	Inhabits benches or alluvial terraces on gentle bajada slopes above major drainages. Found within the Lower Colorado and Arizona Upland subdivisions of the Sonoran Desert where former agricultural areas were managed by the Hohokam Indians (AGFD, 2003d).	Unlikely. The analysis area is outside the known geographic range for this species but may contain suitable desertscrub habitat.
Agavaceae	Agave	parviflora	Smallflower century plant (Santa Cruz striped agave Agave)				State Protected Species (Pima)				Santa Cruz and southern Pima counties, Arizona, and northern Mexico. Elevation range 3,600 to 4,600 feet (ARPC, 2001).	Open slopes in grasslands and oak woodlands (AGFD, 2003f; ARPC, 2001).	None. The analysis area is outside the highly restricted known range of this species.
Agavaceae	Agave	toumeyana var. bella	Tourney's century plant (Toumey agave)				State Protected Species (Pinal) Salvage Restricted				Galiuro, Sierra Ancha, Superstition, Pinal, and New River mountains and Fish Creek Hill in Arizona (SEINet, 2012). Elevation range 2,625 to 5,577 feet (FNA, 2012s).	Desertscrub and chaparral areas (Kearney and Peebles, 1960) and pinyon-juniper woodlands in rocky limestone or basalt slope substrates (FNA, 2012s).	None. The analysis area is outside the highly restricted known geographic range of this species.
Agavaceae	Agave	schottii var. treleasei	Trelease's century plant (Trelease agave)			CNF Sensitive	State Protected Species (Pima)				Known from the Santa Catalina Mountains, Pima County (ARPC, 2001). Possibly in Cochise County (ARPC, 2001). Elevation range 3,600 to 6,500 feet (ARPC, 2001).	Grasslands, juniper-oak woodlands, and higher elevations of desertscrub (AGFD, 2005f; ARPC, 2001).	None. The analysis area is outside the highly restricted known geographic range of this species.
Apiaceae	Lilaeopsis	schaffneriana ssp. recurva	Huachuca water umbel	Endangered (Cochise, Pima)			State Protected Species (Cochise, Pima, Pinal) Highly safeguarded		SDCP plant species	Critical Habitat: Portions of the San Pedro River upstream from St. David and several canyons in or near the Huachuca Mountains (USFWS 2012f).	Southeastern Arizona, southwestern New Mexico, and Sonora, Mexico (AGFD, 2003b; AGFD, 2004b). Disjunct populations in Cochise and Santa Cruz counties exist along the Santa Cruz and San Pedro Rivers, Sonoita Creek, and Scotia, Sunnyside, Garden, and Bear Canyons. Elevation range 3,500 to 6,500 feet (USFWS, 2012a).	Inhabits cienegas, perennial low gradient streams, and wetlands (USFWS, 2012a).	Possible. The analysis area is within the geographic and elevation range for this species. This species has been reported within 3 miles of the proposed route in Arizona (AGFD-HDMS 2013). Possible. The analysis area is within the geographic and elevation range of this species and may contain suitable habitat. Species is known to be present on San Pedro River and Cienega Creek.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Apocynaceae	Amsonia	kearneyana	Kearney's bluestar	Endangered (Pima)							Restricted to west-facing drainages in the Baboquivari Mountains of Arizona. Elevation range 3,600 to 3,800 feet (USFWS, 2012b).	Stable, partially shaded, coarse alluvium along dry washes in the desertscrub-grassland transition zone (USFWS, 2012b).	None. The analysis area may contain dry wash habitat but is outside the highly restricted known geographic range for this species.
Apocynaceae	Amsonia	grandiflora	Arizona bluestar (Large-flowered blue star)				State Protected Species (Pima) Highly safeguarded				Patagonia, Atascosa, and Pajarito mountains in southern Arizona, and Sonora, Mexico. Elevation range 3,900 to 4,500 feet (ARPC, 2001).	Full sun or partial shade in oak woodlands on canyon sides and bottoms near Emory and Mexican blue oaks (ARPC, 2001).	None. The analysis area is outside the highly restricted known geographic range of this species in Arizona and lacks well-developed oak woodland habitat.
Asclepiadaceae	Asclepias	lemmonii	Lemmon's milkweed			CNF Sensitive					Found in southeastern Arizona and Chihuahua and Sonora, Mexico. Known from the Baboquivari, Santa Rita, Huachuca, and Chiricahua mountains. Elevation range 5,050 to 7,300 feet in Arizona (AGFD, 2006o).	Inhabits canyons, dry slopes, burned areas, and roadsides within Madrean evergreen, pine-oak, and oak woodland communities (AGFD, 2006o).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range of this species in Arizona and lacks well-developed woodland habitat.
Aspleniaceae	Asplenium	[Ceterach] dalhousiae	Countess Dalhousie's spleenwort (Dalhouse spleenwort)		BLM Sensitive (Tucson Field Office)						Currently found in Mule and Huachuca mountains of Cochise County and Baboquivari Mountains in Pima County, Arizona. Elevation range 4,000 to 6,000 feet (AGFD, 2004j).	Occupies cliff face seeps in the Mule Mountains (BLM, 2010). Inhabits Sky Islands in shady, rocky, moist ravines in Madrean oak woodlands (AGFD, 2004j).	None. The analysis area is outside the known geographic range for this species and lacks oak woodland habitat.
Asteraceae	Perityle	ajoensis	Ajo rock daisy				State Protected Species (Pima, Pinal) Salvage Restricted				Ajo Mountains of Arizona. Elevation range 2,600 to 4,800 feet (ARPC, 2001).	Vertical cliffs or boulder faces on the north- or west-facing aspects (ARPC, 2001).	None. The analysis area is outside the known geographic but within the elevational range for this species, but lacks vertical cliff faces.
Asteraceae	Erigeron	arisolius	Arid throne fleabane			CNF Sensitive					Cochise, Pima and Santa Cruz counties, Arizona, and Sonora, Mexico. Restricted to Chiricahua and Huachuca mountains in Cochise County (AGFD, 2001i; 2004r), and possibly in southwestern New Mexico. Elevation range 4,265 to 5,650 feet (AGFD, 2001i).	Moist, rocky soils in grasslands or grassy opening in oak woodlands (AGFD, 2001i).	None. The portion of the analysis area within CNF is outside the known geographic range of this species and lacks moist habitat.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Asteraceae	Pectis	imberbis	Beardless chinchweed			CNF Sensitive					Southern Arizona, and western Chihuahua and eastern Sonora, Mexico. In Arizona, found in the Canelo Hills and the Atascosa, Patagonia, Santa Rita, and Huachuca mountains. Elevation range 3,600 to 6,475 feet (AGFD, 2000d).	Eroded granite in oak grasslands. Also found along road cuts (AGFD, 2000d).	None. The portion of the analysis area within CNF is outside the known geographic range of this species and lacks suitable oak grassland habitat.
Asteraceae	Erigeron	kuschei	Chiricahua fleabane			CNF Sensitive, ANPPL Salvage Restricted	State Protected Species (Cochise)				Restricted to four sites in the Chiricahua Mountains. Elevation range 7,000 to 9,500 feet (ARPC, 2001).	Moss-covered, north-facing, shaded, granitic cliffs and rock ledges (ARPC, 2001).	None. The analysis area, including the portion within CNF, is outside the highly restricted known geographic and elevational range for this species.
Asteraceae	Perityle	cochisensis	Cochise rockdaisy (Chiricahua rock daisy)			CNF Sensitive, ANPPL Salvage Restricted					Reported from Dos Cabezas and Chiricahua mountains, Cochise County. Elevation range 5,500 to 7,000 feet (ARPC, 2001).	Moist, north-facing cliff faces (ARPC, 2001).	None. The analysis area, including the portion within CNF, is outside the highly restricted known geographic and elevational range of this species.
Asteraceae	Perityle	ambrosiifolia	Lace-leaved rockdaisy (Clifton rock daisy)		BLM Sensitive	CNF Sensitive	State Protected Species (Cochise)				Limited to Eagle Creek and San Francisco River, Greenlee County, Arizona. Elevation range 1,800 to 4,900 feet (AGFD, 2005c).	Narrow range of cliff faces within Gila Conglomerate (BLM, 2010). Inhabits pinyon-juniper grassland (AGFD, 2005c).	None. The analysis area is outside the highly restricted known geographic range for this species.
Asteraceae	Erigeron	piscaticus	Fish Creek fleabane		BLM Sensitive (Tucson Field Office)	CNF Sensitive	State Protected Species (Pima)				Known to occur only from Galiuro Mountains in Graham County to Santa Catalina Mountains in Pima County. Elevation range 2,250 to 3,500 feet (AGFD, 2001d).	Moist, sandy canyon bottoms with perennial streams (AGFD, 2001d).	None. The analysis area is outside the highly restricted known geographic range for this species and lacks moist canyon habitat.
Asteraceae	Heterotheca	rutteri	Rutter's false golden aster (Huachuca golden aster)		BLM Sensitive (Tucson/Safford Field Offices)	CNF Sensitive					Known from only 11 locations in Arizona, including Altar Valley, Sonoita, Canelo Hills, and the Huachuca and Patagonia mountains. Elevation range 3,560 to 5,275 feet (AGFD, 2001f).	Open grasslands, road cuts, and disturbed sites (AGFD, 2001f).	None. The analysis area is outside the highly restricted known geographic range for this species.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Asteraceae	Senecio	multidentatus var. huachucanus	Huachuca Mountain ragwort (Huachuca groundsel)			CNF Sensitive, ANPPL Salvage Restricted	State Protected Species (Cochise) Highly safeguarded				Southern Arizona and Sonora, Mexico. In Arizona, known from Santa Rita, Huachuca, and Chiricahua mountains. Elevation range 7,000 to 9,500 feet (ARPC, 2001).	Moist loamy soils associated with granite rock outcroppings. Found on north-facing, shaded slopes in oak-pine and pine-fir forests (ARPC, 2001).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range of this species and lacks oak-pine or pine-fir forested habitat.
Asteraceae	Erigeron	lemmonii	Lemmon's fleabane	Candidate (Cochise)			State Protected Species (Cochise) Highly safeguarded				Found only in one location in the Huachuca Mountains of Arizona (AGFD, 2004h; AGFD, 2011a). Elevation range 1,500 to 6,000 feet (USFWS, 2012a).	Grows in dense clumps in crevices, ledges, and boulders in canyon bottoms in pine-oak woodlands (USFWS, 2012a).	None. The analysis area is outside the highly restricted known geographic range for this species and does not have pine-oak woodlands.
Asteraceae	Psilactis	gentryi	Mexican tansy aster			CNF Sensitive					Huachuca Mountains of Cochise County and south to central Mexico. Elevation range 5,900 to 9,180 feet (AGFD, 2004w).	Moist habitats, including high meadows, fields, roadsides, and stream and lake margins within woodlands (AGFD, 2004w).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range of this species and lacks moist habitat.
Asteraceae	Perityle	cernua	Organ Mountain rock daisy (Nodding cliff daisy)		BLM Sensitive (Las Cruces District)						Currently known only as a narrow endemic in the Organ Mountains of New Mexico (NMRPTC, 1999e). Elevation range 5,000 to 8,800 feet (NMRPTC, 1999e).	Igneous cliffs primarily on rhyolite substrates (NMRPTC, 1999e).	None. The analysis area is outside the highly restricted known geographic range for this species.
Asteraceae	Hieracium	rusbyi (abscissum)	Rusby hawkweed			CNF Sensitive					Southeastern Arizona, New Mexico, and Chihuahua, Mexico. Known from the Pinaleño, Chiricahua, and Huachuca mountains in Arizona. Elevation range 8,800 to 9,300 feet (AGFD, 2005t).	Shady slopes in mixed conifer forests (AGFD, 2005t).	None. The analysis area, including the portion within CNF, is within the known geographic range but lacks conifer forest habitat.
Asteraceae	Heterotheca	rutteri	Rutter's false goldenaster										None. The portion area, including the portion with CNF, is outside the highly restricted known geographic range of this species.
Asteraceae	Packera	neomexicana var. toumeyi	Toumey groundsel			CNF Sensitive					Restricted to the Pinal Mountains in Pinal County and the Chiricahua and Huachuca mountains in Cochise County. Elevation range 5,500 to 9,200 feet (AGFD, 2004u).	Found in loose, rocky soil in oak chaparral through pine forest communities (AGFD, 2004u).	None. The portion of the analysis area within CNF is outside the known geographic and elevational range of this species and lacks oak chaparral or pine forest habitat.

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Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Berberidaceae	Berberis	harrisoniana	Harrison's barberry (Kofa Mountain barberry)		BLM Sensitive (Tucson Field Office)						Limited to Kofa Mountains and isolated ranges in western Pima County and southwestern Maricopa County of Arizona (AGFD, 2004n). Elevation range 2,200 to 3,500 feet (AGFD, 2004n).	Inhabits bottoms of deep, rocky, shady canyons (AGFD, 2004n).	None. The analysis area is outside the highly restricted known geographic range for this species.
Bixaceae	Amoreuxia	gonzalezii	Santa Rita mountain yellowshow (Saiya)			CNF Sensitive	State Protected Species (Pima) Highly safeguarded				Santa Rita Mountains in Arizona, and northern Mexico. Elevation range 4,200 to 4,500 feet (ARPC, 2001).	Rocky, limestone hillsides (ARPC, 2001).	None. The analysis area is outside the highly restricted known geographic range of this species.
Brassicaceae	Arabis	tricornuta	Rincon Mountain rock cress (Chiricahua rock cress)			CNF Sensitive					Endemic to southern Arizona. Found in Rincon, Santa Rita, Huachuca and Chiricahua mountains. Elevation range 6,000 to 8,840 feet (AGFD, 2006n).	Inhabits steep, rocky slopes beneath pines. Also found on road banks. Occurs in Madrean evergreen woodlands and montane conifer forests (AGFD, 2006n).	None. The analysis area, including the portion within CNF, is outside of the known geographic and elevational range of this species and lacks forested habitat.
Cactaceae	Echinomastus	erectocentrus var. acunensis	Acuña cactus	Candidate, SDCP Species (Pima, Pinal)			State Protected Species (Pima, Pinal) Highly safeguarded				Present in western Pima County, central Pinal County, and southwestern Maricopa County in Arizona (AGFD, 2005a; AGFD, 2011b). Elevation range 1,300 to 2,000 feet (USFWS, 2012b).	Inhabits well drained knolls and gravel ridges in Sonoran desertscrub (USFWS, 2012b).	None. The analysis area is outside the highly restricted known geographic range for this species.
Cactaceae	Echinocereus	coccineus Engelm. var. arizonicus (triglochidiatus var. arizonicus)	Arizona hedgehog cactus	Endangered (Pinal)			State Protected Species (Pinal) Highly safeguarded				Central Arizona, in Pinal and Gila counties (AGFD, 2003b; AGFD, 2004f). Elevation range 3,200 to 5,200 feet (USFWS, 2012h).	Inhabits the ecotone between interior chaparral and Madrean evergreen woodland (USFWS, 2012h).	None. The analysis area is outside the highly restricted known geographic range for this species.
Cactaceae	Epithelantha	micromeris	Pingpong-ball cactus (Button cactus)				State Protected Species (Cochise) Salvage Restricted				Santa Cruz and Cochise counties in southeastern Arizona. Elevation range 3,000 to 5,800 feet (AGFD, 2005k).	Chihuahuan Desert grasslands on ridges and hillsides. Limestone substrates and occasionally on igneous soils (AGFD, 2005k).	Possible. The analysis area is within the geographic range of this species and suitable grassland habitat may be present.
Cactaceae	Escobaria (Coryphantha)	sneedii	Sneeds pincushion cactus (Carpet foxtail cactus)				State Protected Species (Cochise) Salvage Restricted				Arizona, New Mexico, Texas, and Chihuahua, Mexico. Known in Arizona from the Chiricahua Mountains and in New Mexico from the Florida Mountains near Deming and the Guadalupe Mountains near Carlsbad. Elevation range 1,969 to 8,530 feet (SEINet, 2012).	Confined to limestone outcrops in Chihuahuan desertscrub to conifer woodlands (SEINet, 2012).	None. The study corridor is outside the highly restricted known geographic range of this species.

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				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Cactaceae	Escobaria	robbinsiorum	Cochise foxtail cactus (Cochise pincushion cactus)	Threatened (Cochise)			State Protected Species (Cochise)				Southeastern and southwestern Cochise County of Arizona and northern Sonora Mexico (AGFD, 2001a). Elevations greater than 4,200 feet (USFWS, 2012a).	Semi-desert grassland with small shrubs, agave, other cacti, and grama grass. Grows on limestone hills (USFWS, 2012a).	None. The analysis area contains semi-desert grassland habitat but is outside the highly restricted known geographic range for this species.
Cactaceae	Peniocereus	striatus	Gearstem cactus (Dahlia rooted cereus)				State Protected Species (Cochise) Salvage Restricted				South-central Arizona along the U.S.–Mexico border. Elevation range 0 to 1,640 feet (FNA, 2012r).	Sonoran Desert, small hills and flats (FNA, 2012r).	None. The analysis area is outside the known geographic range for this species and lacks Sonoran Desert sand hills and flat areas.
Cactaceae	Ferocactus	cylindraceus	California barrel cactus (Desert barrel cactus)				State Protected Species (Pima, Pinal) Salvage Restricted				Utah, Nevada, California, Arizona, and Baja California and Sonora, Mexico. Within Arizona, known from the low deserts of the western and central portions of the State. Southeastern-most records in the State are from the Tucson Mountains (SEINet, 2012). Elevation range 200 to 2,900 feet (AGFD, 2005m).	Sonoran and Mohave deserts on gravelly or rocky hillsides, canyon walls, alluvial fans, and wash margins. Alluvial plains and igneous and limestone substrates (AGFD, 2005m).	Possible. The analysis area is within the geographic and elevation range of this species and suitable desertscrub habitat may be present.
Cactaceae	Echinocereus	pseudopectinatus	Devilthorn (Devilthorn hedgehog cactus)				State Protected Species (Cochise) Salvage Restricted				Southeastern Arizona. Elevation range 3,940 to 4,595 feet (FNA, 2012d).	Chihuahuan Desert, mostly semi-desert grassland, desertscrub, igneous substrates, and rocky slopes (FNA, 2012d).	Possible. The analysis area is within the geographic and elevation range of this species and suitable desert scrub and semi-desert grassland habitat may be present.
Cactaceae	Opuntia	polyacantha (arenaria)	El Paso prickly pear (Dune prickly pear)		BLM Sensitive (Las Cruces District)			NM Endangered (Luna, Doña Ana)			Southern Socorro, Doña Ana and Luna counties in New Mexico. Also in Texas and Chihuahua Mexico. Elevation range 3,800 to 4,300 feet (NMRPTC, 1998a).	Sandy areas in Chihuahuan desertscrub (NMRPTC, 1998a).	Possible. The analysis area is within the geographic and elevational range of this species and suitable sandy habitat may be present.
Cactaceae	Ferocactus	emoryi	Emory's barrel cactus ()				State Protected Species (Pima) Salvage Restricted				Southeastern Arizona. Elevation range 0 to 3,940 feet (FNA, 2012e).	Sonoran desertscrub on hillsides, alluvial fans, wash margins, flats, mesas, bajadas, rocky slopes. Gravelly, rocky, or sandy soils. Igneous substrates (FNA, 2012e).	None. The analysis area is outside the known geographic range for this species.

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Cactaceae	Opuntia	engelmannii var. flavispina	Cactus apple (Engelmann prickly pear)				State Protected Species (Pima) Salvage Restricted				Graham, Maricopa, Mohave, Pima (Organ Pipe National Monument, Waterman Mountains, Atascosa Mountains, and Cabeza Prieta National Wildlife Refuge), Santa Cruz, and Yavapai counties in Arizona (SEINet, 2012). Elevation range 1,640 to 2,625 feet (FNA, 2012h).	Sonoran Desert on sandy bajadas (FNA, 2012h).	Possible. The analysis area is within the known geographic and elevational range for this species and may contain suitable desertscrub habitat.
Cactaceae	Peniocereus	greggii var. greggii	Night-blooming cereus (Greg Night-blooming cereus)		BLM Sensitive (Las Cruces District)		State Protected Species (Cochise)	NM Endangered (Hidalgo, Grant, Luna, Doña Ana)			Doña Ana, Grant, Hidalgo, and Luna counties in New Mexico. Also in Texas, Arizona, and Chihuahua, Mexico. Elevation range 3,940 to 4,920 feet (FNA, 2012a).	Sandy to silty gravelly soils in level terrain. Desert grasslands and Chihuahuan desertscrub (NMRPTC, 1998b).	Possible. The analysis area is within the geographic range of this species and suitable grassland or desertscrub habitat may be present.
Cactaceae	Opuntia	x kelvinensis	Kelvin cholla				State Protected Species (Pima) Salvage Restricted				Southeastern Arizona. Elevation range 1,800 to 3,100 feet (SEINET, 2012).	Edges of grasslands, desertscrub, rolling hills, and rocky flats and slopes (SEINet, 2012).	Possible. The analysis area is within the geographic and elevation range of this species and this species has been reported from west edge of Tucson.
Cactaceae	Echinocereus	fasciculatus	Pink flower hedgehog cactus (Magenta Flower hedge-hog cactus)				State Protected Species (Pima) Salvage Restricted				South-central to southwestern Arizona. Elevation range 1,970 to 3,280 feet (FNA, 2012c).	Sonoran Desert, desertscrub, semi-desert grassland, and interior chaparral (FNA, 2012c).	Possible. The analysis area is within the geographic and elevation range of this species and suitable habitat may be present.
Cactaceae	Echinomastus	erectocentrus var. erectocentrus	Redspine fishhook cactus (Needle-spined pineapple cactus)			ANPPL Salvage Restricted	State Protected Species (Cochise, Pima, Pinal) Salvage Restricted		SDCP plant species		Pinal, Pima, and Cochise counties in Arizona. Elevation range 2,953 to 4,921 feet (AGFD, 2009a; 2004ac).	Desert grasslands on low bajadas and gravelly hills. Igneous, calcareous, and limestone substrates. (ARPC, 2001; AGFD, 2009a).	Possible. The analysis area is within the geographic range of this species and suitable grassland habitat may be present. This species is known to be present within 2 miles of the Proposed Upgrade Section and within 3 miles of the New Build Section (AGFD, 2012b; 2012c).
Cactaceae	Echinocactus	horizontalonius var. nicholii	Nichol's echinocactus (Nichol Turk's head cactus)	Endangered (Pima, Pinal)			State Protected Species (Pima, Pinal) Highly safeguarded				Limited to three populations in the Waterman and Vekol mountains, and Koht Kohl Hill (AGFD, 2004e; AGFD, 2008). Elevation range 2,400 to 4,100 feet (USFWS, 2012b).	Sonoran desertscrub in unshaded microclimates on dissected alluvial fans at the foot of and on inclined terraces and saddles on limestone mountains (USFWS, 2012b).	None. The analysis area is outside of the highly restricted known geographic range for this species.

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Cactaceae	Peniocereus	greggii var. transmontanus	Night-blooming cereus				State Protected Species (Pima) Salvage Restricted				Southern Arizona. Elevation range 985 to 3,610 feet (FNA, 2012i).	Sonoran Desert, creosote-bursage flats, in flats, edges of washes, and slopes of small hills. Sandy or gravelly loam substrates (FNA, 2012i).	Possible. The analysis area is within the geographic and elevation range of this species and suitable creosote-bursage habitat may be present within the analysis area.
Cactaceae	Escobaria	organensis	Organ Mountain foxtail cactus (Organ Mountain pincushion cactus)					NM Endangered (Doña Ana)			Restricted to the Organ and northern Franklin mountains in Doña Ana County, New Mexico. Elevation range 4,400 to 8,530 feet (NMRPTC, 2006b).	On andesite, quartz-monzonite, rhyolite, and limestone in Chihuahuan desertscrub and oak or pinyon-juniper woodlands (NMRPTC, 2006b).	None. The proposed analysis area may contain suitable Chihuahuan desert scrub habitat but is outside the highly restricted known geographic range of this species.
Cactaceae	Stenocereus	thurberi	Organ pipe cactus				State Protected Species (Pinal, Pima) Salvage Restricted				South-central Arizona in Organ Pipe National Monument. Elevation range 66 to 3,610 feet (FNA, 2012p).	Upland Sonoran Desertscrub (FNA, 2012p).	None. The analysis area is outside the highly restricted known geographic range for this species.
Cactaceae	Coryphantha	scheeri var. robustispina	Long-tubercle beehive cactus (Pima pineapple cactus)	Endangered (Pima)			State Protected Plant (Pima) Highly safeguarded		SDCP plant species		South-central Arizona and north-central Sonora. Between Santa Rita and Baboquivari mountains in Pima and Santa Cruz counties (AGFD, 2001b). Elevation range 2,300 to 5,000 feet (USFWS, 2012b).	Open areas or flat ridge tops in Sonoran desertscrub or semi-desert grassland communities (USFWS, 2012b).	Possible. The analysis area is within its geographic and elevation range and contains desertscrub or semi-desert grassland habitat. This species has been reported within 2 miles of the proposed route in Arizona (AGFD, 2012b).
Cactaceae	Echinocereus	ledingii	Leding's hedgehog cactus (Pinaleño hedgehog cactus)				State Protected Species (Cochise) Salvage Restricted				Santa Catalina, Graham, Pinaleno, and Mule mountains of Arizona (Benson, 1969). Also found in Santa Theresa and Dos Cabezas mountains of Arizona (AGFD, 1998b; 2004ab). Elevation range 4,000 to 7,400 feet (AGFD, 1998b).	Gravelly or sandy mountain slopes in chaparral, woodlands, or grasslands (Benson, 1969).	None. The analysis area is below the elevational limits for this species and it has not been reported in the mountain ranges in close proximity to the analysis area.
Cactaceae	Pachycereus (Lophocereus)	schottii	Senita cactus				State Protected Species (Pima) Salvage Restricted				Extreme southern Arizona in Organ Pipe National Monument in Pima County and Sonora and Baja California in Mexico (Benson, 1969). Elevation range 1,000 to 2,000 feet (Epple and Epple, 2012)	Deserts in sandy soils (Epple and Epple, 2012).	None. The analysis area is outside the highly restricted known geographic range for this species.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Cactaceae	Coryphantha	robustispina (scheeri var. valida)	Scheer's beehive cactus (Slender needle corycactus)				State Protected Species (Cochise) Salvage Restricted				Texas, southern New Mexico, southern Arizona, and Chihuahua, Durango, and Coahuila, Mexico. In Arizona, known from San Simon Valley and near Nogales. Elevation range 3,900 to 4,800 feet (AGFD, 2005i).	Found in deep, sandy soils in bottomlands or grasslands and deserts (AGFD, 2005i).	Possible. The analysis area is within the known geographic and elevational range of this species and may contain suitable grassland habitat in San Simon Valley near Willcox. This species has been reported within 3 miles of the proposed route in Arizona (AGFD-HDMS 2013).
Cactaceae	Escobaria (Coryphantha)	sneedii var. sneedii	Sneed's pincushion cactus	Endangered (Doña Ana)	BLM Sensitive (Las Cruces District)			NM Endangered (Doña Ana)			Limited to Organ and Franklin mountains east of the Rio Grande River and between Las Cruces, New Mexico, and El Paso, Texas (NMRPTC, 2005c; USFWS, 1986). Elevation range 4,000 to 5,900 feet (NMRPTC, 2005b; NatureServe, 2011).	Restricted to limestone formations. Grows in cracks on vertical cliffs or ledges in Chihuahuan desertscrub (NMRPTC, 2005b).	None. The analysis area is outside the highly restricted known geographic range of this species.
Cactaceae	Escobaria	villardii	Sacramento Mountain foxtail cactus		BLM Sensitive (Doña Ana)			NM Endangered			New Mexico, Otero and Doña Ana counties; west slope of the Sacramento Mountains and northern Franklin Mountains.	Loamy soils of desert grassland with Chihuahuan desert scrub on broad limestone benches in mountainous terrain; 1,370-2,000 m (4,500-6,500 ft).	
Cactaceae	Cylindropuntia (Opuntia)	versicolor	Staghorn cholla				State Protected Species (Pima, Pinal) Salvage Restricted						Possible. The analysis area is within the geographic and elevation range for this species. This species is known to be present within 2 miles of the Upgrade Section (AGFD, 2012b).
Cactaceae	Mammillaria	thorneri	Thorner's nipple cactus (Thorner fishhook cactus)				State Protected Species (Pinal) Salvage Restricted				South-central Arizona (FNA, 2012l) and Sonora, Mexico. Elevation range 1,310 to 1,970 feet (SEINet, 2012).	Sonoran desertscrub under shrubs along valley floors. Silty or sandy soil substrates (SEINet, 2012).	Possible. The analysis area is within the geographic and elevation range for this species. This species is known to be present within 2 miles of the Upgrade Section (AGFD, 2012b).
Cactaceae	Escobaria	villardii	Sacramento Mountain foxtail cactus (Villard's pincushion cactus)		BLM Sensitive (Las Cruces District)			NM Endangered (Doña Ana)			Limited to west slope of Sacramento Mountains and north end of Franklin Mountains of New Mexico. Elevation range 4,500 to 6,500 feet (NMRPTC, 2006a).	Desert grasslands with Chihuahuan desertscrub in loamy soils on limestone benches (NMRPTC, 2006a).	None. The analysis area is outside the highly restricted known geographic range for this species.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Cactaceae	Mamillaria	wrightii var. wilcoxii	Wilcox's nipple cactus (Wilcox pincushion cactus)				State Protected Species (Cochise) Salvage Restricted	NM Endangered (Hidalgo)			Arizona, New Mexico, and likely Mexico. Known from Cochise, Graham, and Santa Cruz Counties in Arizona and Hidalgo County in New Mexico (NatureServe, 2011).	Low hills along the edges of woodlands (NatureServe, 2011).	None. The analysis area is within the known geographic range of this species but lacks well-developed woodland habitat. However, habitat may be present in the Arizona portion of the analysis area and this species is known to be present within 2 miles of the Upgrade Section in Arizona (AGFD, 2012b).
Campanulaceae	Lobelia	fenestralis	Fringeleaf lobelia (Leafy lobelia)				State Protected Species (Cochise) Salvage Restricted				Southeastern Arizona, southwestern New Mexico, and western Texas southward to Sonora and Chihuahua Mexico. Elevation range 3,510 to 6,000 feet (AGFD, 2005o).	Grasslands, swales, and moist meadows. Pine-oak woodlands in Mexico. Unknown substrates (AGFD, 2005o).	None. The analysis area is outside the known geographic range for this species and lacks pine-oak woodland habitat.
Capparaceae	Cleome	multicaulis	Slender spider flower (Playa spider plant)				State Protected Species (Cochise) Salvage Restricted				Southern Wyoming, south-central Colorado, southwestern New Mexico, southeastern Arizona, and south to central Mexico. Reported from Willcox Playa and San Bernardino Ranch, but Arizona populations have not been confirmed since the 1940s (AGFD, 2001k). Elevation range 3,600 to 4,200 feet (AGFD, 2001k).	Wet, saline, or alkaline soils in playas or alkaline meadows (AGFD, 2001k).	Unlikely. The Arizona portion of the analysis area is within the known geographic and elevational range of this species and may contain suitable playa habitat but it is unclear whether this species still occurs in Arizona.
Caryophyllaceae	Stellaria	porsildii	Porsild's starwort			CNF Sensitive					Only known from Rustler Park in the Chiricahua Mountains of Cochise County, Arizona, and Signal Peak of the Piños Altos Mountains of Grant County, New Mexico. Elevation range 7,000 to 8,000 feet (ARPC, 2001).	Open meadows and partially shaded understory in pine, fir, and oak forests (ARPC, 2001).	None. The analysis area, including the portion within CNF, is outside the highly restricted known geographic and elevational range of this species and lacks meadow or forest habitat.
Crassulaceae	Graptopetalum	bartramii	Patagonia Mountain leatherpetal (Bartram stonecrop)		BLM Sensitive (Tucson Field Office)	CNF Sensitive	State Protected Species (Cochise, Pima) Salvage Restricted				Present in several mountain ranges in southeastern Arizona. Elevation range 3,650 to 6,700 feet (AGFD, 2001e).	Rocky outcrops in canyons with Madrean evergreen woodland (BLM, 2010). Inhabits cracks with deep litter cover along arroyos (AGFD, 2001e).	None. The analysis area is within the geographic and elevation range of this species, but lacks well-developed evergreen woodland habitat with deep leaf litter.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Crossosomataceae	Apacheria	chiricahuensis	Apachebush (Chiricahua rock flower)				State Protected Species (Cochise) Highly safeguarded				Known from Chiricahua and Dragoon mountains in Arizona and San Mateo and Black mountains in New Mexico. Possibly in Mexico. Elevation range 5,160 to 7,000 feet (AGFD, 2005h).	Cliff faces and crevices of rock outcrops (AGFD, 2005h).	None. The analysis area is outside the known geographic and elevational range of this species.
Cucurbitaceae	Tumamoca	macdougalii	Tumamoc globeberry		BLM Sensitive, SDCP Species (Tucson Field Office)	ANNPL Salvage Restricted	State Protected Species (Pima, Pinal) Salvage Restricted		SDCP plant species		Present in southern Pinal and Maricopa counties and widespread in Pima County. Also present in Sonora and Sinaloa, Mexico. Elevations below 3,000 feet (AGFD, 2004p).	Xeric areas under nurse plants along gullies and shady washes of hills and valleys in Sonoran desertscrub and Sinaloan thornscrub communities (AGFD, 2004p).	Possible. The analysis area is within the geographic range for this species and may contain suitable desertscrub habitat. This species is known to be present within 2 miles of the Upgrade Section (AGFD, 2012b).
Cyperaceae	Carex	chihuahuensis	Chihuahuan sedge			CNF Sensitive		NM Endangered (Hidalgo)			Found in southeastern Arizona, southwestern New Mexico, and Sonora and Chihuahua, Mexico. Known from the Chiricahua, Huachuca, Pinaleño, Sierra Ancha, Santa Catalina, San Luis, Rincon, Atascosa, and Santa Rita mountains. Also known from the San Bernardino Valley in Cochise County. Elevation range 3,600 to 7,200 feet in Arizona (AGFD, 2004q).	Cienegas, marshy areas, canyon bottoms, and wet meadows in pine-oak forests and riparian woodlands (AGFD, 2004q).	None. The portion of the analysis area within CNF is within the known geographic and elevational range of this species but lacks aquatic/wet habitats required by this species.
Cyperaceae	Carex	ultra (spissa var. ultra)	Cochise sedge (Arizona giant sedge)		BLM Sensitive (Safford Field Office)	CNF Sensitive					Found in numerous mountain ranges of southeastern Arizona. Elevation range 2,040 to 6,000 feet (AGFD, 2000b).	Inhabits moist areas near springs and streams with undulating rocky-gravelly soils (AGFD, 2000b).	Possible. The analysis area is within the geographic and elevational range of this species and may contain suitable habitat. However, this species has no potential to occur on CNF lands (Upgrade Section Segment U1) within the analysis area. This species has been reported within 3 miles of the proposed route in Arizona (AGFD-HDMS 2013).

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Euphorbiaceae	Tragia	laciniata	Sonoita noseburn (Sonoran noseburn)			CNF Sensitive					Southeastern Arizona and eastern Sonora and Chihuahua, Mexico, and possibly New Mexico as well. In Arizona, known from Canelo Hills and Santa Rita, Pajarito, Patagonia, Atascosa, and Huachuca mountains. Elevation range 3,500 to 5,680 feet (AGDF, 2004y).	Along streams, canyon bottoms, and on shaded hillsides in oak woodlands and pine-oak forests (AGFD, 2004y).	None. The portion of the analysis area within CNF is outside the known geographic range of this species and lacks well-developed oak woodland or pine-oak forest habitat.
Euphorbiaceae	Euphorbia	macropus	Huachuca Mountain spurge (Woodland spurge)				State Protected Species (Cochise) Salvage Restricted				Southern Arizona, to Chihuahua and Sonora Mexico (AGFD, 2005I). Elevation range 2,140 to 7,425 feet; SEINet collections in Arizona ranged from 5,200 to 7,250 feet (AGFD, 2005I).	Pine-oak woodlands in shady canyon bottoms and open hillsides in leaf litter. Alluvial substrates (AGFD, 2005I).	None. The analysis area is outside the known geographic range for this species and lacks pine-oak woodland habitat.
Fabaceae	Pediomelum	pentaphyllum	Small Indian breadroot (Chihuahua scurf pea)		BLM Sensitive (Las Cruces District)	CNF Sensitive					Known from two sites in eastern Hidalgo County, New Mexico, and possibly Cochise and Graham counties in Arizona. Also in Chihuahua, Mexico. Elevation range 4,400 to 6,600 feet (NMRPTC, 1999c).	Occupies healthy grasslands (BLM, 2010). Associated with mesquite and desert grasslands in New Mexico (NMRPTC, 1999c).	Possible. The analysis area is within the geographic and elevation range of this species and suitable grassland habitat may be present.
Fabaceae	Astragalus	cobrensis var. maguirei	Maguire-s milkvetch (Coppermine milkvetch)			CNF Sensitive, ANPPL Salvage Restricted	State Protected Species (Cochise) Salvage Restricted				Known from Chiricahua and Peloncillo mountains. Possibly in Pinaleno Mountains. Elevation range 5,080 to 7,450 feet (AGFD, 1999c).	Near stream bottoms and on lower terraces in shady canyons on shattered rock and rich humus. Found in pinyon-juniper through oak-pine woodlands (AGFD, 1999c).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range of this species and lacks well-developed woodland habitat.
Fabaceae	Dalea	tentaculoides	Gentry's indigobush		BLM Sensitive (Tucson Field Office)	CNF Sensitive	State Protected Species (Pima) Highly safeguarded				Limited to Sycamore Canyon of Atascosa and Pajarito mountains in Santa Cruz County and Baboquivari Mountains in Pima County. Elevation range 3,600 to 4,580 feet (AGFD, 2001c).	Floodplain terraces in shady canyons (BLM, 2010). Inhabits canyon bottom on cobble terraces (AGFD, 2001c).	None. The analysis area is outside the highly restricted known geographic range for this species.
Fabaceae	Astragalus	hypoxylus	Huachuca Mountain milkvetch (Huachuca milkvetch)		BLM Sensitive (Tucson Field Office)	CNF Sensitive, ANPPL Salvage Restricted	State Protected Species (Cochise) Salvage Restricted				Huachuca and Patagonia mountains, Cochise and Santa Cruz counties of Arizona. Elevation range 5,300 to 6,100 feet (AGFD, 1999b).	Inhabits open rocky limestone clearings in oak-juniper-pinyon woodlands with 25-30° slopes (AGFD, 1999b).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range for this species (AGFD, 1999b; 2006b) and lacks evergreen woodland habitat.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Fabaceae	Lupinus	huachucanus	Huachuca Mountain lupine			CNF Sensitive					Southeastern Arizona and Sonora, Chihuahua, and Durango, Mexico. Known from Santa Rita, Huachuca, and Chiricahua mountains in Arizona. Elevation range 5,000 to 7,600 feet (AGFD, 2001c).	Canyon bottoms, roadsides, and moderate to steep slopes in pine and oak-pine forests (AGFD, 2001c).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range of this species and lacks pine or oak-pine forest habitat.
Fabaceae	Lupinus	lemmonii	Lemmon’s lupine			CNF Sensitive					Nevada, Arizona, southwestern New Mexico, and Sonora, Mexico. Known from Baboquivari, Santa Catalina, Galiuro, Dragoon, and Chiricahua mountains in southeastern Arizona and Peloncillo Mountains in southwestern New Mexico. Elevation range 4,848 to 8,600 feet (SEINet, 2012).	Collected in gravelly canyon bottoms and on disturbed slopes of dry pinyon-juniper through pine woodlands (SEINet, 2012).	None. The analysis area, including the portion within CNF, is within the known geographic range of this species but is below its known elevational limit and lacks pinyon-juniper woodland habitat.
Fabaceae	Lysiloma	watsonii	Littleleaf false tamarind				State Protected Species (Pima)		Salvage Restricted		Southern Arizona in the Rincon Mountains in Pima County, Chihuahua, Sonora, and northern Sinaloa, Mexico. Elevation range 2,800 to 4,750 feet (AGFD, 2005p).	Arizona upland desertscrub and desert grasslands on rocky hillsides and slopes of creeks and tributaries (AGFD, 2005p).	Possible. The analysis area is within the known geographic and elevational range for this species and may contain suitable desertscrub or grassland habitat.
Fabaceae	Astragalus	cobrensis var. maguirei	Copper mine milk vetch (Maguire milkvetch)		BLM Sensitive (Las Cruces)						Collected only once in New Mexico in Peloncillo Mountains (NMRPTC, 1999a). Elevation range 5,500 to 7,000 feet (NMRPTC, 1999a).	Dry creek beds, banks, canyon sides, generally dry, open slopes with oaks, juniper, and pine (NMRPTC, 1999a).	None. The analysis area is outside the known geographic and elevational range of this species and lacks wooded habitat.
Fabaceae	Desmodium	metcalfei	Metcalfe’s tick-trefoil			CNF Sensitive					Arizona, New Mexico, and Sinaloa, Mexico. Known from Cochise, Coconino, Gila, Pinal, Santa Cruz, and Yavapai counties in Arizona and Grant and Sierra counties in New Mexico. Elevation range 4,000 to 6,500 feet (NMRPTC, 2009).	Rocky slopes and canyons. Found within grasslands, oak-pinyon-juniper woodlands, and riparian forests (NMRPTC, 2009).	None. The portion of the analysis area within CNF is within the known geographic and elevational range of this species but lacks rocky slope or canyon habitat.
Fabaceae	Errazurizia	rotundata	Round-leaf dune broom (Round-leaf broom)		BLM Sensitive (Tucson Field Office)						Primarily in Little Colorado River drainage, but has been collected in Maricopa County in Arizona. Elevation range 4,620 to 5,200 feet (AGFD, 2005b).	Great Basin desertscrub with widely spaced shrubs. Rocky hilltops and ledges in sandy areas (AGFD, 2005b).	None. The analysis area is outside the known geographic range for this species and lacks Great Basin desertscrub habitat.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Fabaceae	Coursetia	glabella	Smooth babybonnets			CNF Sensitive					Extreme southern Arizona and Chihuahua, Mexico. Known from Canelo Hills and Patagonia, Huachuca, and Chiricahua mountains in Arizona. Elevation range 5,000 to 7,200 feet (AGFD, 2001h).	Dry slopes with partial shade in Madrean oak woodlands, and oak-juniper and pine-oak forests (AGFD, 2001h).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range of this species.
Gentianaceae	Gentianella	wislizeni	Chiricahua Mountain dwarf gentian (Wislizeni gentian)			CNF Sensitive, ANPPL Salvage Restricted	State Protected Species (Cochise)				Chiricahua and White mountains of Arizona, and Chihuahua and Sonora, Mexico. Elevation range 6,500 to 8,000 feet (ARPC, 2001).	Open meadows and partially shaded slopes in mixed conifer forests (ARPC, 2001).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range of this species and lacks conifer forest habitat.
Iridaceae	Sisyrinchium	cernuum	Nodding blue-eyed grass			CNF Sensitive					Arizona and Sonora, Chihuahua, Baja California, Sinaloa, and Colima, Mexico. In Arizona, reported from San Francisco, Rincon, Santa Rita, Huachuca, Mule, and Chiricahua mountains. Elevation range 3,281 to 7,874 feet (SEINet, 2012).	Moist areas, meadows, and stream banks in woodland communities (SEINet, 2012).	None. The portion of the analysis area within CNF is within the known geographic and elevational range of this species but lacks moist habitat in woodland communities.
Lamiaceae	Salvia	amissa	Santa Catalina Mountain sage (Aravaipa sage)		BLM Sensitive (Tucson Field Office)						Limited to Galiuro, Superstition, and Sierra Ancha mountains and Eagle Creek near Morenci (AGFD, 2002a; SEINet, 2012). Elevation range 1,500 to 5,000 feet (AGFD, 2002a).	Floodplain terraces in shady canyons (BLM, 2010).	None. The analysis area is outside the known geographic range for this species and lacks floodplain terraces in shady canyon habitat.
Liliaceae	Triteleiopsis	palmeri	Palmer's bajalily (Blue sand lily)				State Protected Species (Pima) Salvage Restricted				Pinta Sands, Agua Dulce and Gila mountains, Baja California, and Sonora, Mexico. Elevation range from sea level to 1,600 feet (ARPC, 2001).	Loose dunes and sandy desert flats (ARPC, 2001).	None. The analysis area is outside the known geographic and elevational range of this species.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Liliaceae	Allium	glandulosum	Gland onion				State Protected Species (Pima) Salvage Restricted				Southeastern Arizona and northern Mexico. Mule, Huachuca and Galiuro Mountains, and Canelo Hills in Arizona. Elevation range 3,150 to 6,830 feet (SEINet 2013).	Mountainous, cool regions, primarily in pine forests (Kearney and Peebles 1960). Also oak/juniper grasslands (SEINet 2013).	Unlikely. The analysis area is outside the reported geographic range of this species and lacks suitable habitat. However, this species has been reported within 3 miles of the agency alternative WC1a and local alternative Ga in Arizona (AGFD-HDMS 2013), although the general area of the reported location (Township/Range 14S24E) consists mostly of playa, alkalai flats, and semi-desert grasslands, and does not fit the reported habitat requirements.
Liliaceae	Allium	gooddingii	Goodding's onion	Conservation Agreement (USFWS 1997) (Pima)							White Mountains in Apache County and Santa Catalina Mountains in Pima County, Arizona (AGFD 1999a; AGFD, 2004i). Elevation range 7,500 to 11,250 feet (USFWS, 2012b).	Inhabits shaded sites on north-trending drainages, on slopes, or in narrow canyons, within mixed conifer and spruce-fir forests (USFWS, 2012b).	None. The analysis area is below the known elevation range for this species and does not have mixed conifer or spruce-fir forest habitat.
Liliaceae	Zigadenus	virescens	Green death camas				State Protected Species (Cochise) Salvage Restricted				Arizona and New Mexico border, southwestern Colorado, and Mexico. Elevation range 3,280 to 10,500 feet (FNA, 2012q).	Montane coniferous forests (FNA, 2012q).	None. The analysis area lacks suitable montane coniferous forests.
Liliaceae	Lilium	parryi	Lemon lily			CNF Sensitive, ANPPL Salvage Restricted	State Protected Species (Cochise, Pima) Highly safeguarded				Southeastern Arizona, California, and Sonora, Mexico. Known from Huachuca, Chiricahua, and Santa Rita mountains in Arizona. Elevation range 5,500 to 7,800 feet (ARPC, 2001).	Sandy, saturated soils high in organic content. Found in shady canyon bottoms along perennial stream or near hillside springs (ARPC, 2001).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range of this species and lacks montane canyon habitat with perennial water.
Liliaceae	Allium	plummerae	Tanners canyon onion (Plummer onion)				State Protected Species (Pima) Salvage Restricted				Southeastern Arizona and northern Mexico. Baboquivari, Chiricahua, and Huachuca mountains in Arizona. Elevation range 4,800 to 9,000 feet (AGFD, 2005g).	Wet meadows, stream banks, and montane, rocky slopes (AGFD, 2005g).	None. The analysis area is outside the known geographic range of this species and lacks moist habitat.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Liliaceae	Allium	rhizomatum	Gland onion (Redflower onion)				State Protected Species (Cochise) Salvage Restricted				Southeastern Arizona, southwestern New Mexico, and western Texas. In Arizona, known from Chiricahua, Huachuca, and Mule mountains in Cochise County and Canelo Hills in Santa Cruz County. Elevation range 4,400 to 7,000 feet (AGFD, 2004aa).	Along streams and near moist rocky places in grasslands and juniper-oak woodlands (AGFD, 2004aa).	None. The analysis area is outside the known geographic range of this species and lacks moist habitat in juniper-oak woodlands.
Malvaceae	Abutilon	parishii	Parish's Indian mallow (Pima Indian mallow)		BLM Sensitive (Tucson Field Office)	CNF Sensitive	State Protected Plant (Pima, Pinal)				Present in about 17 desert ranges of Central Arizona (BLM, 2010; AGFD, 2000e). Elevation range 1,700 to 4,900 feet (AGFD, 2000e).	Mesic situations in full sun within higher elevation Sonoran desertscrub. On rocky hillsides, cliff bases, canyon bottoms, lower side slopes and ledges of canyons among rocks and boulders. Slopes can exceed 45° (AGFD, 2000e).	Possible. The analysis area is within geographic and elevational range of this species and may contain suitable desertscrub habitat. This species has been observed within 3 miles of the proposed route in Arizona (AGFD HDMS 2013).
Malvaceae	Abutilon	thurberi	Thurber Indian mallow				State Protected Species (Pima)				Known from the western slope of the Baboquivari Mountains in Pima County, Arizona. Also known from Sonora, Mexico. Recorded at an elevation of 3,500 feet (ARPC, 2001).	Shaded areas of canyons in Arizona upland desertscrub (ARPC, 2001).	None. The analysis area may contain suitable desertscrub habitat, but is outside the highly restricted known range of this species.
Orchidaceae	Hexalectris	spicata var. arizonica	Arizona coralroot			CNF Sensitive	State Protected Species (Cochise) Salvage Restricted				Cochise, Santa Cruz, and Pima counties, Arizona. Elevation range 3,480 to 6,950 feet (AGFD, 2005e).	On wooded sides of canyons and canyon bottoms in oak or mixed oak-conifer woodlands. Grows in heavy leaf litter under oaks, pines, and associated shrubs (AGFD, 2005e).	None. The portion of the analysis area within CNF is within the known geographic and elevational range of this species but lacks well-developed oak woodland habitat with heavy leaf litter.
Orchidaceae	Listera	convallarioides	Broadlipped twayblade (Broadleaf twayblade)				State Protected Species (Pima) Salvage Restricted				Widely distributed in North America. Disjunct presence in Arizona in Apache, Coconino, and Pima (Santa Catalina Mountains) counties. Elevation range 7,000 to 8,600 feet (AGFD, 2005n).	Mixed deciduous or coniferous forests in rich humus in open areas or boggy meadows. Perennial stream banks or seeps in damp soils. Circumneutral or mildly acidic soils (AGFD, 2005n).	None. The analysis area is outside the known geographic and elevational range for this species and lacks deciduous and coniferous forest habitat.
Orchidaceae	Spiranthes	delitescens	Reclusive lady's tresses (Canelo Hills ladies' tresses)	Endangered (Cochise)			State Protected Species (Cochise) Highly safe guarded				Known from only five sites in Cochise and Santa Cruz counties in the San Pedro watershed (USFWS, 2001). Elevation range 4,000 to 5,000 feet (USFWS, 2012a; AGFD, 2000a).	Inhabits finely grained, highly organic, saturated soils of cienegas, intermixed with grasses and sedges (USFWS, 2012a).	None. The proposed Project is outside the highly restricted known geographic range for this species

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Orchidaceae	Hexalectris	spicata	Spiked crested coralroot (Crested coral root)				State Protected Species (Cochise, Pima) Salvage Restricted	NM Endangered			Widely distributed in North America. Disjunct presence in Arizona in Apache, Coconino, and Pima (Santa Catalina Mountains) counties. Elevation range 7,000 to 8,600 feet (AGFD, 2005n).	Mixed deciduous or coniferous forests in rich humus in open areas or boggy meadows. Perennial stream banks or seeps in damp soils. Circumneutral or mildly acidic soils (AGFD, 2005n).	None. The analysis area is outside the known geographic and elevational range for this species and lacks deciduous and coniferous forest habitat.
Orchidaceae	Schiedeella	arizonica	Parasitic lady's tresses (Fallen ladies'-tresses)				State Protected Species (Cochise, Pima) Salvage Restricted				Throughout southwestern United States. Found in southeastern Arizona. Elevation range 6,450 to 9,300 feet in Arizona (AGFD, 2005q).	Mesic, mixed, coniferous-deciduous forest in heavy forest duff along flat to very steep terrain within rocky or bare soils (AGFD, 2005q).	None. The analysis area is below elevational range for this species and lacks coniferous-deciduous forest habitat.
Orchidaceae	Cypripedium	parviflorum var. pubescens	Greater yellow lady's slipper (Golden lady's slipper)					NM Endangered (Grant)			Widespread in the United States and Canada. In New Mexico, found in Catron, Grant, Los Alamos, San Juan, and Santa Fe counties. In Arizona, found in the White Mountains in Apache and Greenlee counties (NatureServe, 2011).	Forested wetlands, including bogs, swamps, and wet meadows (NatureServe, 2011).	None. The analysis area may be within the known geographic range of this species, but lacks forested wetland habitat.
Orchidaceae	Malaxis	corymbosa	Huachuca Mountain adder's-mouth orchid (Madrean adders mouth)				State Protected Species (Cochise) Salvage Restricted				Santa Rita, Huachuca, and Chiricahua mountains in Arizona. Elevation of 6,500 feet (FNA, 2012k).	Shaded mountain canyons (FNA, 2012k).	None. The analysis area is outside the known geographic and below the elevational range for this species and lacks shaded canyon habitat.
Orchidaceae	Stenorrhynchos	michuacanum	Michuacan lady orchid (Michoacan ladies'-tresses)				State Protected Species (Cochise) Salvage Restricted				Santa Catalina and Huachuca mountains of Arizona and Chisos and Chinati mountains of Texas. Elevation range 6,235 to 7,220 feet (FNA, 2012j).	Grassy slopes in pine-oak woodlands. Areas with seepage (FNA, 2012j).	None. The analysis area is outside the known geographic range and above the elevation range for this species and lacks pine-oak woodland habitat.
Orchidaceae	Malaxis	porphyrea	Cochise adder's-mouth orchid (Purple adders mouth)				State Protected Species (Cochise) Salvage Restricted				Catalina, Chiricahua, Huachuca, and Santa Rita mountains and Apache County in Arizona. Also in New Mexico, Texas, and northern Mexico. Elevation range 7,000 to 9,200 feet (ARPC, 2001).	Mixed conifer forest. Slightly damp, grassy, or mossy areas (ARPC, 2001).	None. The analysis area is outside the elevational range of this species and lacks coniferous forest habitat.
Orchidaceae	Malaxis	tenuis	Arizona adder's-mouth orchid (Slender adder's mouth)				State Protected Species (Cochise, Pima) Salvage Restricted				Santa Catalina and Chiricahua mountains in Arizona (SEINet, 2012).	Mixed conifer forest. Slightly damp, grassy, or mossy areas (ARPC, 2001).	None. The analysis area is outside the elevational range for this species and lacks coniferous forest habitat.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Orchidaceae	Hexalectris	warnockii	Texas crested coralroot (Texas purple-spike coralroot)		BLM Sensitive (Tucson, Safford Field Offices)	CNF Sensitive, ANPPL Salvage Restricted					Western Texas, New Mexico, southeastern Arizona, and Baja California, Mexico. Known from Chiricahua, Mule, and Huachuca mountains in Arizona. Elevation range 5,000 to 7,000 feet (AGFD, 2001g).	Humus soil under leaf litter in shady canyon bottoms. Occurs in oak-mixed-conifer communities (AGFD, 2001g).	None. The analysis area is outside the known geographic and elevational range of this species and lacks suitable oak-mixed conifer habitat.
Orchidaceae	Platanthera	limosa	Thurber's bog orchid				State Protected Species (Pima, Cochise) Salvage Restricted				Southeastern Arizona and Southwestern New Mexico. Elevation range 5,900 to 8,200 feet (FNA, 2012n).	Marshes, stream banks, and seeps in lightly forested areas (FNA, 2012n).	None. The analysis area is outside the elevation range of this species and lacks wet areas within forested habitats.
Poaceae	Puccinellia	parishii	Bog alkali grass (Parish's alkali grass)		BLM Sensitive (Las Cruces District)			NM Endangered (Hidalgo, Grant)			Found in Catron, Cibola, Grant, Hidalgo, McKinley, Sandoval, and San Juan counties in New Mexico. Elevation range 2,600 to 7,200 feet (NMRPTC, 1999f).	Alkali springs, seeps, and seasonally wet areas usually at heads of drainages (NMRPTC, 1999f).	Possible. The analysis area is within the known geographic range for this species and may contain suitable moist habitat.
Poaceae	Muhlenbergia	palmeri	Southwestern muhly			CNF Sensitive					Southeastern Arizona. Known from Canelo Hills and Baboquivari, Santa Catalina, Santa Rita, Pajarito, and Huachuca mountains. Elevation range 2,750 to 6,000 feet (AGFD, 2000d).	Cliffs and rocky slopes in canyons and along streams. Occurs in riparian communities within upland desertscrub, semi-desert grassland, and evergreen woodland environments (AGFD, 2000d).	None. The portion of the analysis area within CNF is within the known geographic and elevational range of this species, but lacks cliffy habitat in riparian communities.
Poaceae	Paspalum	virleti	Virlet paspalum			CNF Sensitive					Southern Arizona and Sonora, Mexico. In Arizona, known from Brawley Wash, Pima County and Pajarito Mountains, Santa Cruz County. Elevation range 2,600 to 3,851 feet in Arizona (SEINet, 2012).	Recorded along canyon bottom in oak-juniper woodland and in thorn scrub in rocky mountainsides (SEINet, 2012).	None. The analysis area, including the portion within CNF, is outside the known geographic range of this species and lacks oak-juniper woodland or thorn scrub habitat.
Polemoniaceae	Polemonium	pauciflorum ssp. hinckleyi	Hinckley's polemonium			CNF Sensitive					Southeastern Arizona, West Texas, and Nuevo Leon, Mexico. In Arizona, known from eight sites in the Chiricahua Mountains (NatureServe, 2011).	Moist, humus soil along streams in shady canyons. Found in oak-juniper through pine-fir forests (NatureServe, 2011).	None. The portion of the analysis area within CNF is outside of the known geographic range of this species and lacks suitable forest habitat near streams.
Polygalaceae	Polygala	rimulicola var. mescalerorum	Mescalero milkwort (San Andres milkwort)					NM Endangered (Luna)			Restricted to San Andres Mountains of Doña Ana County, New Mexico. Elevation range 5,700 to 6,300 feet (NMRPTC, 1999g).	Found in crevices of sandy limestone cliffs in montane scrub (NMRPTC, 1999g).	None. The analysis area is outside the highly restricted known geographic range of this species and lacks montane scrub habitat.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Polygonaceae	Rumex	orthoneurus	Chiricahua Mountain dock (Blumer's dock)			CNF Sensitive, ANPPL Salvage Restricted	State Protected Species (Cochise) Salvage Restricted				Eastern Arizona and western New Mexico. In Arizona, known from Mogollon Rim and Sierra Ancha, White, Huachuca, and Chiricahua mountains. Elevation range 4,480 to 9,660 feet (AGFD, 2002b).	Moist, organic soils near perennial springs or streams in mid- to high-elevation wetlands (AGFD, 2002b).	None. The analysis area, including the portion within CNF, is within the known geographic range of this species but lacks mid- to high-elevation wetland habitat.
Polygonaceae	Eriogonum	ericifolium var. ericifolium	Yavapai County buckwheat (Heartleaf wild-buckwheat)			CNF Sensitive					Endemic to a small area of central Arizona (Yavapai and Coconino Counties). One specimen collected at Cienega Creek in Pima County (AGFD, 2005s). Elevation range 2,950 to 6,300 feet (AGFD, 2005s).	Dry, gravelly to rocky slopes of lacustrine, in mixed grasslands, chaparral and oak-woodlands (AZGFD, 2005s).	None. The portion of the corridor within CNF is outside the reported geographic range of this species. This species has been reported within 3 miles of the proposed route in Pima County (AGFD-HDMS 2013), but the location of this specimen is far from the portion of the corridor with CNF, and may represent a different variety (AGFD, 2005s).
Polygonaceae	Eriogonum	capillare	San Carlos wild-buckwheat				State Protected Species (Cochise, Pima, Pinal) Salvage Restricted				Cochise, Graham, Gila, and Pinal counties of Arizona. Elevation range 1,960 to 4,400 feet (AGFD, 2003g; 2004ad).	Disturbed, unstable, gravelly areas free from competition. Hill slopes and washes (AGFD, 2003g).	Possible. The analysis area is within the geographic range of this species and suitable habitat may be present. No specimens from analysis area (SEINet, 2012), but this species is known to be present within 2 miles of the Proposed Upgrade Section and within 3 miles of the New Build Section (AGFD, 2012b; 2012c).
Polygonaceae	Eriogonum	terrenatum	San Pedro River wild-buckwheat		BLM Sensitive (Tucson, Safford Field Offices)						Two disjunct populations in Pima and Cochise counties, elevation range 3,520 to 3,914 feet (AGFD, 2006e).	Occurs on limestone and clay soils of St. David Formation in the San Pedro River National Conservation Area (BLM, 2010). Found in gravelly soils in <i>Larrea tridentata</i> and <i>Acacia constricta</i> communities (AGFD, 2006e).	Possible. The analysis area is within the geographic and elevation range of this species. Most likely to be present near San Pedro River and Cienega Creek in Segments U2 and U3, respectively. This species has been reported within 3 miles of the proposed route in Arizona (AGFD-HDMS 2013).

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Portulacaceae	Phemeranthus (Talinum)	parvulus (marginatum)	Tepic flame flower			CNF Sensitive, ANPPL Salvage Restricted	State Protected Species (Cochise) Salvage Restricted				Huachuca Mountains, Arizona, and Sonora, Chihuahua, Durango, and Nayarit, Mexico. Elevation range 5,000 to 7,000 feet (ARPC, 2001).	Shallow pockets of sandy soil on exposed bedrock terraces and ledges in pine-oak forest communities (AGFD, 2004x; ARPC, 2001).	None. The analysis area, including the portion within CNF, is outside of the known geographic and elevational range of this species and lacks suitable pine-oak forest habitat.
Primulaceae	Samolus	vagans	Chiricahua Mountain brookweed			CNF Sensitive					Southeastern Arizona and Sonora, Chihuahua, and Durango, Mexico. Within Arizona, reported from the Santa Catalina, Rincon, Santa Rita, Pajarito, Huachuca, Mule, and Chiricahua mountains. Elevation range 5,300 to 6,000 feet (SEINet, 2012).	Recorded at perennial springs and streams in oak-juniper through pine-oak forests (SEINet, 2012).	None. The analysis area, including the portion within CNF, is within the known geographic range of this species but lacks forest habitat near perennial water.
Psilotaceae	Psilotum	nudum	Whisk fern				State Protected Species (Pima) Highly safeguarded				Southeastern Arizona, southeastern United States, Mexico, and Central America. Elevation range 0 to 3,610 feet in Arizona (FNA, 2012o).	Mesic woodlands, thickets, rocky slopes, swamps, and hammocks (FNA, 2012o).	None. The analysis area is within the geographic and elevation rage for this species but lacks wet areas in mesic woodlands.
Roseaceae	Purshia (=cowania)	subintegra	Arizona Cliff-rose	Endangered (Graham)							In Arizona known only from near Horseshoe Lake in Maricopa County, Cottonwood, Yavapai County, near Burro Creek, Mohave County, and near Bylas, Graham County.	Limestone hills within Sonoran desertscrub (AGFD 2001l).	None. The nearest population is over 50 miles from the analysis area.
Roseaceae	Vauquelinia	californica ssp. sonorensis	Sonora rosewood (Arizona Sonoran rosewood)		BLM Sensitive (Tucson Field Office)						In Arizona, restricted to Ajo Mountains of Pima County and Sand Tank Mountains of Maricopa County. Elevation range 2,300 to 3,700 feet (AGFD, 2005d).	Sonoran desertscrub and desert grassland on moderate to steep slopes (AGFD, 2005d). Appendix V.1. United States Fish and Wildlife Service list of sensitive plant species known to occur within the Project region, including information on geographic range, habitat, and potential occurrence within the analysis area.	None. The analysis area is outside the highly restricted known geographic range of this species.
Roseaceae	Potentilla	rhyolitica var. chiricahuensis	Chiricahua cinquefoil			CNF Sensitive					Endemic to upper elevations of the Chiricahua Mountains (USDA-FS, 2007).	Rocky openings in mixed conifer forests (USDA-FS, 2007).	None. The analysis area, including the portion within CNF, is outside the highly restricted known geographic range of this species and lacks mixed conifer forest habitat.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Roseaceae	Potentilla	rhyolitica var. rhyolitica	Huachuca cinquefoil			CNF Sensitive					Endemic to the summit areas of the Huachuca and Santa Rita mountains (USDA-FS, 2007).	Crevices of rhyolitic and quartzitic outcrops (USDA-FS, 2007).	None. The analysis area, including the portion within CNF, is outside the highly restricted known geographic range of this species and lacks suitable high-elevation outcrop habitat
Roseaceae	Vauquelinia	californica ssp. pauciflora	Arizona rosewood (Limestone Arizona rosewood)				State Protected Species (Cochise) Salvage Restricted				Arizona and New Mexico border, southwestern Colorado, and Mexico. Elevation range 3,280 to 10,500 feet (FNA, 2012q).	Montane coniferous forests (FNA, 2012q).	None. The analysis area lacks suitable montane coniferous forests.
Roseaceae	Crataegus	wootoniana	Wooton's hawthorn		BLM Sensitive (Las Cruces District)						Limited to Piños Altos and Sacramento mountains. Elevation range 6,500 to 8,000 feet (NMRPTC, 1999b).	Canyon bottoms and forest understory in lower montane coniferous forest (NMRPTC, 1999b).	None. The analysis area is outside of the highly restricted known geographic range of this species and lacks montane coniferous forest habitat.
Saxifragaceae	Heuchera	glomerulata	Chiricahua Mountain alumroot (Arizona alum root)			CNF Sensitive					Pinal, Pinaleño, Santa Theresa, Galiuro, Santa Catalina and Chiricahua mountains in Arizona and Animas Peak in New Mexico. Elevation range 4,000 to 9,000 feet (AGFD, 2004s).	Found in humus soil on shaded, north-facing, rocky slopes near seeps and streams (AGFD, 2004s).	None. The portion of the analysis area within CNF is within the known geographic and elevational range of this species but lacks seep and stream habitat.
Scrophulariaceae	Penstemon	alamosensis	Los Alamos beardtongue (Alamo beardtongue)		BLM Sensitive (Las Cruces District)						In New Mexico, limited to west slope of Sacramento Mountains and east slope of San Andres Mountains. Elevation range 4,300 to 5,300 feet (NMRPTC, 1999d).	Sheltered rocky areas, canyon sides and bottoms, on limestone (NMRPTC, 1999d).	None. The analysis area is outside the highly restricted known geographic range for this species.
Scrophulariaceae	Penstemon	discolor	Catalina beardtongue			CNF Sensitive	State Protected Species (Pima, Pinal) Highly safeguarded				Atascosa, Dagoon, Galiuro, Santa Catalina, Santa Teresa, and Winchester mountains of Arizona. Elevation range 4,400 to 7,200 feet (ARPC, 2001).	Chaparral, pine-oak woodland in bedrock outcrops. Granite or volcanic tuff substrate (ARPC, 2001).	None. The analysis area is within the geographic and elevation range for this species but lacks pine-oak woodland habitats.
Scrophulariaceae	Limosella	pubiflora	Chiricahua Mountain mudwort (Chiricahua mudwort)			CNF Sensitive					Cochise County, Arizona, and extreme southwestern Hidalgo County, New Mexico (NMRPTC, 1999h).	Muddy edges of streams and ponds (NMRPTC, 1999h).	None. The portion of the analysis area within CNF may be within the known geographic range of this species, but it is below the known elevational range and lacks stream or pond habitat.

Table D-1. Special Status Plant Species (endangered, threatened, and sensitive) That Were Analyzed for Potential to Occur within the Analysis Area; FWS, Arizona, and New Mexico (Continued)

Group/Family	Genus	Species	Common Name	Federal Status			State Status		Local Status		Range	Habitat	Potential to Occur in Portions of the Analysis Area in which it is Listed as a Special Status Species
				ESA (County)	BLM (District)	USFS	Arizona (county)	New Mexico (County)	SDCP	Special Designation Area(s)			
Scrophulariaceae	Scrophularia	macrantha	New Mexico figwort (Mimbres figwort)		BLM Sensitive (Las Cruces District)						Known only from Mimbres Mountains, Kneeling Nun, and Cook's Peak in New Mexico. Elevation range 6,500 to 8,200 feet (NMRPTC, 2008).	Steep, rocky, igneous cliffs and talus slopes that are north-facing within pinyon-juniper and lower montane coniferous forests (NMRPTC, 2008).	None. The analysis area is outside the known geographic and elevation range for this species and lacks forested habitat.
Scrophulariaceae	Castilleja	nervata	Trans-Pecos Indian paintbrush			CNF Sensitive					Arizona, and Sonora, Chihuahua, Sinaloa and Colima, Mexico. Known from White, Santa Rita, and Chiricahua mountains in Arizona (SEINet, 2012). Elevation range 2,461 to 7,546 feet (NatureServe, 2011).	Rocky slopes in pine-oak through pine-fir woodlands (NatureServe, 2011).	None. The analysis area, including the portion within CNF, is within the known geographic and elevational range of this species, but lacks pine-fir woodland habitat.
Solanaceae	Physalis	latiphysa	Broadleaf ground cherry			CNF Sensitive, ANPPL Salvage Restricted					Southeastern Arizona. Known from the San Bernardino Valley in Cochise County, the Pinalaño Mountains in Graham County, Arivaca Creek in Pima County, and the Santa Cruz River in Santa Cruz County. Elevation range 3,000 to 4,700 feet (AGFD, 2012b).	Granitic, gravelly soils in washes in the shade of shrubs and boulders within desertscrub and grasslands (AGFD, 2012b).	Possible. The portion of the analysis area within CNF is within the known geographic and elevational range of this species and may contain suitable grassland habitat. This species has been reported within 2 miles of the Upgrade Section within Pima County (AGFD 2012b).
Sterculiaceae	Fremontodendron	californicum	California's flannel bush (Flannel bush)				State Protected Species (Pinal) Salvage Restricted				Central Arizona, California, Baja California, Mexico. Elevation range 3,500 to 6,500 feet in Arizona (AGFD, 2005j).	Chaparral and oak-pine woodlands on well drained rocky hillsides and ridges in Arizona. Northern slopes. Dry, poor, rocky soils and granite boulders (AGFD, 2005j).	None. The analysis area is outside the known geographic range for this species and lacks oak-pine woodlands.
Thelypteridaceae	Thelypteris	puberula var. sonorensis	Sonoran maiden fern (Aravaipa woodfern)		BLM Sensitive (Tucson Field Office)						Several disjunct populations at springs, closest of which are in Aravaipa Canyon of Pinal County and Santa Catalina Mountain of Pima County. Elevation range 2,220 to 4,500 feet (AGFD, 2004o).	Moist soils within shade of mesic canyons on riverbanks, seepage areas, and meadow habitats (AGFD, 2006m).	None. The analysis area is outside the known geographic range for this species and lacks moist shady canyon habitat.
Violaceae	Viola	umbraticola	Ponderosa violet (Shade violet)			CNF Sensitive					Southern Arizona and Sonora and Chihuahua, Mexico. In Arizona, known from Santa Catalina, Santa Rita, Huachuca, and Chiricahua mountains. Elevation range 5,200 to 7,500 feet in Arizona (AGFD, 2004z).	Shady canyon bottoms in oak-juniper through ponderosa pine forests (AGFD, 2004z).	None. The analysis area, including the portion within CNF, is outside the known geographic and elevational range of this species and lacks oak-juniper to ponderosa pine forest habitat.

Table D-2. Arizona and New Mexico Noxious Weed Lists

Species Common Name	Scientific Name	Arizona			New Mexico			
		Prohibited Species	Regulated Species	Restricted Species	NM Class A	NM Class B	NM Class C	Watch List Species
African rue (Syrian rue)	<i>Peganum harmala</i>	x				x		
Alfombrilla (Lightningweed)	<i>Drymaria arenariodes</i>	x			x			
Alligator weed	<i>Alternanthera philoxeroides</i>	x						
Anchored water hyacinth	<i>Eichhornia azurea</i>	x						
Austrian fieldcress	<i>Rorippa austriaca</i>	x						
Black henbane	<i>Hyoscyamus niger</i>				x			
Branched broomrape	<i>Orobanche ramosa</i>	x						
Buffelgrass	<i>Cenchrus ciliaris</i>	x	x					
Bull thistle	<i>Cirsium vulgare</i>						x	
Burclover	<i>Medicago polymorpha</i>	x	x					
Camelthorn	<i>Alhagi pseudalhagi</i>	x		x	x			
Canada thistle	<i>Cirsium arvense</i>	x			x			
Carolina horsenettle	<i>Solanum carolinense</i>	x						
Cheatgrass	<i>Bromus tectorum</i>						x	
Chicory	<i>Cichorium intybus</i>					x		
Common purslane	<i>Portulaca oleracea</i>	x	x					
Creeping wartcress (Coronopus)	<i>Coronopus squamatus</i>	x						
Crimson fountaingrass	<i>Pennisetum setaceum</i>							x
Dalmation toadflax	<i>Linaria dalmatica</i>	x		x	x			
Diffuse knapweed	<i>Centaurea diffusa</i>	x		x	x			
Dodder	<i>Cuscuta</i> spp.	x		x				
Dudaim melon (Queen Anne's melon)	<i>Cucumis melo</i>	x						
Dyer's woad	<i>Isatis tinctoria</i>	x			x			
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>				x			
Field bindweed	<i>Convolvulus arvensis</i>	x	x					

Table D-2. Arizona and New Mexico Noxious Weed Lists (Continued)

Species Common Name	Scientific Name	Arizona			New Mexico			
		Prohibited Species	Regulated Species	Restricted Species	NM Class A	NM Class B	NM Class C	Watch List Species
Field sandbur	<i>Cenchrus incertus</i>	x	x					
Floating water hyacinth	<i>Eichhornia crassipes</i>	x	x	x				
Giant cane	<i>Arundo donax</i>							x
Giant salvinia	<i>Salvinia molesta</i>	x	x		x			
Globed-podded hoary cress (Whitetop)	<i>Cardaria draba</i>	x		x				
Hairy whitetop	<i>Cardaria pubescens</i>	x						
Halogeton	<i>Halogeton glomeratus</i>	x		x		x		
Hoary cress	<i>Cardaria</i> spp.				x			
Hydrilla (Florida-elodea)	<i>Hydrilla verticillata</i>	x			x			
Iberian starthistle	<i>Centaurea iberica</i>	x						
Jointed goatgrass	<i>Aegilops cylindrica</i>	x		x			x	
Leafy spurge	<i>Euphorbia esula</i>	x			x			
Lens podded hoary cress	<i>Cardaria chalepensis</i>	x						
<i>Malta starthistle</i>	<i>Centaurea melitensis</i>					x		
Meadow knapweed	<i>Centaurea pratensis</i>							x
Morning glory [All species except <i>Ipomoea carnea</i> , Mexican bush morning glory; <i>Ipomoea triloba</i> , three-lobed morning glory (which is considered a restricted pest); and <i>Ipomoea aborescens</i> , morning glory tree]		x						
Musk thistle	<i>Carduus nutans</i>					x		
Oxeye daisy	<i>Leucanthemum vulgare</i>				x			
Pampas grass	<i>Cortaderia sellonana</i>							x
Parrotfeather	<i>Myriophyllum aquaticum</i>				x			
Perennial pepperweed	<i>Lepidium latifolium</i>					x		
Perennial sowthistle	<i>Sonchus arvensis</i>	x						

Table D-2. Arizona and New Mexico Noxious Weed Lists (Continued)

Species Common Name	Scientific Name	Arizona			New Mexico			
		Prohibited Species	Regulated Species	Restricted Species	NM Class A	NM Class B	NM Class C	Watch List Species
Plumeless thistle	<i>Carduus acanthoides</i>	x						
Poison hemlock	<i>Conium maculatum</i>					x		
Puna grass	<i>Stipa brachychaeta</i>	x						
Puncturevine	<i>Tribulus terrestris</i>	x	x					
Purple loosestrife	<i>Lythrum salicaria</i>				x			
Purple starthistle	<i>Centaurea calcitrapa</i>	x			x			
Quackgrass	<i>Elytrigia repens</i>	x		x				x
Ravenna grass	<i>Saccharum ravennae</i>				x			
Rush skeletonweed	<i>Chondrilla juncea</i>	x						
Russian knapweed	<i>Acroptilon repens</i>	x		x		x		
Russian olive	<i>Elaeagnus angustifolia</i>						x	
Sahara mustard	<i>Brassica tournefortii</i>							x
Saltcedar	<i>Tamarix</i> spp.						x	
Scotch thistle	<i>Onopordum acanthium</i>	x		x	x			
Serrated tussock	<i>Nassella trichotoma</i>	x						
Siberian elm	<i>Ulmus pumila</i>						x	
Sicilian starthistle	<i>Centaurea sulphurea</i>	x						
Southern sandbur	<i>Cenchrus echinatus</i>	x	x					
Spiny cocklebur	<i>Xanthium spinosum</i>							x
Spotted knapweed	<i>Centaurea biebersteinii</i>	x		x	x			
Squarrose knapweed	<i>Centaurea squarrosa</i>	x						
Sweet resinbush	<i>Euryops subcarnosus</i> subsp. <i>vulgaris</i>	x		x				
Tansy ragwort	<i>Senecio jacobaea</i>	x						
Teasel	<i>Dipsacus fullonum</i>					x		
Texas blueweed	<i>Helianthus ciliaris</i>	x		x				

Table D-2. Arizona and New Mexico Noxious Weed Lists (Continued)

Species Common Name	Scientific Name	Arizona			New Mexico			
		Prohibited Species	Regulated Species	Restricted Species	NM Class A	NM Class B	NM Class C	Watch List Species
Three-lobed morning glory	<i>Ipomoea triloba</i>	x		x				
Torpedo grass	<i>Panicum repens</i>	x						
Tree of heaven	<i>Ailanthus altissima</i>					x		
Tropical soda apple	<i>Solanum viarum</i>	x						
Wall rocket	<i>Diploaxis tenuifolia</i>							x
Water-chestnut	<i>Trapa natans</i>	x						
Witchweed	<i>Striga</i> spp.	x						
Yellow starthistle (St. Barnaby's thistle)	<i>Centaurea solstitialis</i>	x		x	x			
Yellow toadflax	<i>Linaria vulgaris</i>				x			
Arizona Noxious Weed Classes (Data last updated April 2012)								
Prohibited Species: Prohibited from entry into Arizona								
Regulated Species: Controlled or quarantined to prevent further infestation or contamination.								
Restricted Species: Quarantined to prevent further infestation or contamination.								
New Mexico Noxious Weed Classes (Data last updated April 2009)								
Class A Species: Not currently present in New Mexico or have a limited distribution								
Class B Species: Limited to portions of New Mexico								
Class C Species: Widespread control measures are encouraged								
Watch List: Potentially problematic								

Table D-3 shows scientific and common names of plant species observed along various routes, segments and alternatives reported in this appendix, table D-1 and table D-2. Taken from a report titled “Southline Transmission Project Resource Report 15: Vegetation” (CH2M Hill 2013g).

Table D-3. Observed Plant Species within the Southline Transmission Project

Common plant species observed during limited field evaluation, alphabetically by genus and species. No species-specific surveys were conducted.

Scientific Name	Common Name
<i>Acacia constricta</i>	Whitethorn acacia
<i>Acacia greggii</i>	Catclaw acacia
<i>Agave palmeri</i>	Palmer's agave
<i>Ambrosia deltoidea</i>	Triangle-leaf bursage
<i>Atriplex canescens</i>	Fourwing saltbush
<i>Baccharis salicifolia</i>	Seepwillow
<i>Baccharis sarothroides</i>	Desert broom
<i>Carnegiea gigantea</i>	Saguaro
<i>Cenchrus ciliaris</i>	Buffelgrass
<i>Chilopsis linearis</i>	Desert willow
<i>Cirsium</i> sp.	Thistle
<i>Condalia ericoides</i>	Javelina bush
<i>Condalia warnockii</i>	Warnock's condalia
<i>Dasyllirion wheeleri</i>	Sotol
<i>Encelia farinosa</i>	Brittlebush
<i>Ephedra</i> sp.	Mormon tea
<i>Erodium cicutarium</i>	Filaree
<i>Ferocactus</i> spp.	Barrel cactus
<i>Flourensia cernua</i>	Tarbush
<i>Fouquieria splendens</i>	Ocotillo
<i>Gutierrezia sarothrae</i>	Broom snakeweed
<i>Hilaria mutica</i>	Tobosagrass
<i>Isocoma tenuisecta</i>	Burroweed
<i>Juniperus</i> sp.	Juniper
<i>Koerberlinia spinosa</i>	Crown of thorns
<i>Larrea tridentata</i>	Creosotebush
<i>Lycium</i> sp.	Wolfberry
<i>Opuntia engelmannii</i>	Engelmann prickly pear
<i>Opuntia fulgida</i>	Chainfruit cholla
<i>Opuntia macrocentra</i>	Long-spined purple prickly pear
<i>Opuntia spinosior</i>	Cane cholla
<i>Nolina microcarpa</i>	Beargrass
<i>Panicum obtusum</i>	Vine mesquite grass
<i>Parkinsonia microphylla</i>	Foothill paloverde

Table D-3. Observed Plant Species within the Southline Transmission Project
(Continued)

Common plant species observed during limited field evaluation, alphabetically by genus and species.
No species-specific surveys were conducted.

Scientific Name	Common Name
<i>Prosopis glandulosa</i>	Honey mesquite
<i>Prosopis velutina</i>	Velvet mesquite
<i>Rhus virens</i> var. <i>coriophylla</i>	Evergreen sumac
<i>Rumex hymenosepalus</i>	Canaigre
<i>Salix gooddingii</i>	Goodding's willow
<i>Salsola tragus</i>	Russian thistle
<i>Senecio</i> sp.	Senecio
<i>Sporobolus wrightii</i>	Big sacaton
<i>Tamarix</i> sp.	Tamarisk
<i>Vachellia vernicosa</i>	Viscid acacia
<i>Yucca baccata</i>	Banana yucca
<i>Yucca elata</i>	Soaptree yucca
<i>Ziziphus obtusifolia</i>	Graythorn

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